

Claim Listing

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A bioprosthesis comprising:
a fixed natural tissue having an elastin content of at least about ~~[[10]]~~30% by weight of the tissue; and
a support ~~material~~ structure comprising a polymeric material or a metallic material attached to the fixed natural tissue.
2. Cancelled.
3. (Original) The bioprosthesis of claim 1, wherein the tissue is an anisotropic tissue.
4. (Original) The bioprosthesis of claim 3, wherein the anisotropic tissue exhibits greater stiffness in a first direction and greater elasticity in a second direction.
5. (Original) The bioprosthesis of claim 1, wherein the tissue is vena cava tissue.
6. (Original) The bioprosthesis of claim 5, wherein the vena cava tissue is porcine vena cava tissue.
7. (Currently Amended) The bioprosthesis of claim 1, wherein the support ~~material comprises~~ structure is a stent.
8. (Currently Amended) The bioprosthesis of claim 1, wherein the support ~~material comprises~~ structure is a suture ring.
9. (Original) The bioprosthesis of claim 1, wherein the bioprosthesis is a bioprosthetic heart valve.
10. (Currently Amended) A bioprosthetic heart valve comprising:
a fixed tissue having an elastin content of at least about 10% by weight of the tissue, wherein the tissue is vena cava tissue; and
a support structure selected from the group consisting of a suture ring and a stent.
11. (Original) The bioprosthetic heart valve of claim 10, wherein the tissue has an elastin content of at least about 30% by weight of the tissue.
12. Cancelled.

13. (Original) The bioprosthetic heart valve of claim 10, wherein the tissue is porcine vena cava tissue.

14. (Original) The bioprosthetic heart valve of claim 10, wherein the bioprosthetic heart valve is a tricuspid heart valve.

15. (Original) The bioprosthetic heart valve of claim 10, wherein the bioprosthetic heart valve is a bicuspid heart valve.

16-33. Cancelled.

34. (New) A bioprosthetic heart valve comprising a valve leaflet that includes a natural tissue having an elastin content greater than about 30% by weight of the natural tissue.

35. (New) The bioprosthetic heart valve of claim 34, in which the natural tissue is a fixed natural tissue.

36. (New) The bioprosthetic heart valve of claim 34, in which the natural tissue is vena cava tissue.

37. (New) The bioprosthetic heart valve of claim 34, in which the bioprosthetic heart valve is a stentless heart valve.

38. (New) A bioprosthetic comprising:
vena cava tissue; and
a support structure comprising a metallic or a polymeric material attached to the vena cava tissue.

39. (New) The bioprosthetic of claim 38, in which the vena cava tissue has been fixed.

40. (New) The bioprosthetic of claim 38, in which the vena cava tissue is porcine vena cava tissue.